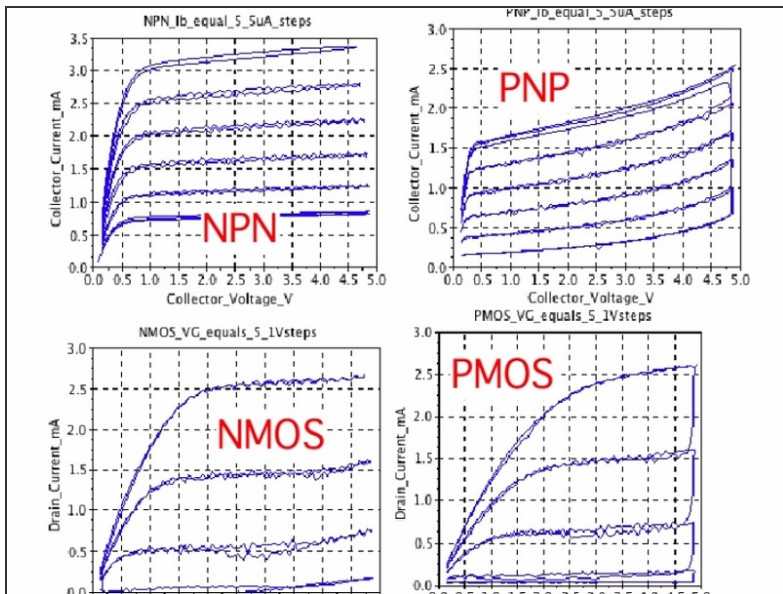# Arduino BiCMOS Curve Tracer

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SUMMARY

This project shows how the analog input and output ports of an Arduino can be programmed to perform automated analog testing. The test results can then be saved as data in text files which can further be plotted into graphs.

Step 1 — Arduino BiCMOS Curve Tracer

- The curve tracer can measure BiCMOS transistors of both polarities.

Step 2

- Here is the whole circuit.

Step 3

- This is a circuit which you may want to use more than once, and solderless breadboards are not usually meant for long-term use. An easy alternative is to build up a CardBoard printed circuit board. This involves printing out a layout, gluing the printout to cardboard and hot-gluing all the components in place. Then, wire-wrap up this simple circuit.

Step 4

- This code needs to be loaded into the Arduino window and the Processing window. The code can be copied and pasted into each window from the following page: http://www.idea2ic.com/BiCmosCurveTracer...

Step 5

Processing Code will start by typing S
Write Data to file by typing W

- It takes a while for the graph window to come up. When it does, the curve tracing is started by first clicking the graph window, and then typing "s". The Processing code also writes the curve tracer data to a textfile. The Sketch/Show_Sketch_Folder menu will open up the proper folder. The file initially gets named the exact time the data was taken. It's not a bad idea to rename that file.

Step 6

- Four SciLab command templates can graph the data files into curves, provided that the path to the files is corrected. The previously-mentioned web page has both these templates and templates for Octave as well.

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